Take-Home Final Exam

EES 3310/5310 Global Climate Change

Due Wednesday April 29 at 2:00 pm

Instructions

- **There are two questions. Answer both.**
- **Type or word process your answers.** The file should be titled `<lastname>_ees3310_final.pdf` (or `.docx`, etc) for undergraduates and `<lastname>_ees5310_final.pdf`, etc. for graduate students, with your own name and the appropriate file extension so I can easily identify that it's your final exam.
- **Turn them in by email no later than Wednesday April 29 at 2:00 pm.**
- **Email the exam to me, *not* Kelsea Best.** My email address is jonathan.gilligan@vanderbilt.edu
- **Be sure to put the subject line, "`EES 3310 Final Exam`" (undergraduates) or "`EES 5310 Final Exam`" (graduate students) on your email.** When you email your exam, I will reply within a few hours to let you know that I got it. **If you don't get a confirmation email, please check with me to make sure I got your exam.**

The first two pages contain guidelines and recommendations for how to approach the exam. The questions are on the last page.

Recommendation

I recommend that you read both questions today, even if you don't plan to write your answers until next week. If you have the questions in the back of your mind it will give you a chance to think about how you want to approach them when you do sit down to answer them.

Guidelines

There is no strict length expected on the essays, but as a guideline I suggest roughly 2 double-spaced pages each.

There is no time limit, but I expect you would spend an hour or two on each question. You may use your books, notes, and any other printed or online resources in answering these questions, but **you must work alone without asking other people for assistance**. You may ask me in person or by email for clarification if you find a question unclear.

Treat these essays the same way you would a regular exam: they do not need to be exhaustive and they **do not need any fancy formatting or citations and footnotes** such as you would use in a formal paper.

The questions focus on the assigned readings by Nordhaus, Pielke, and Victor, and draw on some of the basic science from the first half of the semester. **You do not have to refer to anything other than the assigned readings** in your answers.

You cannot exhaustively answer these questions, so take some time to think about what you're going to say and choose what you will include and what you will leave out. I am looking for clear, well organized essays. **I will give a better grade to a shorter well-written essay with a well-chosen scope higher than to a longer one that covers more material but does not show as much insight in its thoughts or care in its organization and writing.**

You should try to **identify the most important relevant facts and ideas**. You do not need to explain ideas as though your reader has never heard of them; assume that your reader understands the issues

and focus on your argument, not on explaining the background. But different authors may use some technical terms (such as "mitigation") differently, so if you use technical jargon *briefly* explain the terms so your reader knows in which sense you are using them (e.g., "mitigation (limiting the amount of warming) . . . ").

Support your claims with evidence to the extent you can: don't go overboard with detail, but if you're saying something that a reasonable person might dispute, give the reader a reason to believe your version.

Your essay should have a clear structure of an introduction, a section where you develop your ideas, and a clear conclusion. Because this is an exam, you do not need a clear thesis statement at the beginning and you may develop your ideas as you go, but be sure to take time to at least sketch your argument so you write with a clear direction and do not ramble aimlessly.

Because this is an exam essay, I will not be harsh about a small number of minor grammar or spelling errors, but you should not be sloppy. Your essays should, by and large, be well-written and clear.

Honor Pledge

All work on this examination is to be yours alone.

- You may not ask anyone (except me) for assistance.
- You may *consult* written, printed, or online material, but you may not pass off others' ideas as though they were your own. If you introduce someone else's ideas, simply mention where they came from and you're fine.

On your exam, please write the following honor pledge:

I pledge my honor that I have neither given nor received improper assistance.

Essay Questions

The questions have equal weight. Answer both of them.

The specific prompts are printed in **boldface**, followed by some context to give you an idea of how I suggest that you approach the prompts.

Question #1

In *Global Warming Gridlock*, David Victor discusses three myths of policymaking: The Scientists' Myth, the Engineers' Myth, and the Diplomats' Myth (pp. 5–7).

Discuss *The Climate Casino* and *The Climate Fix* in terms of these myths:

- Do the myths point to major weaknesses in either or both books' analyses and policy recommendations? If so, discuss the weakness.
- Can you rescue or defend the books from this criticism?
  - If the author changed his argument a bit, could he fix the weakness?
  - Or is Victor wrong when he claims that the myths are false?

Question #2

Discuss the pros and cons of focusing on CO_2 emissions in climate policy.

Roger Pielke argues that it is foolish to focus only on carbon dioxide emissions when we're making climate policy, and he recommends considering the role of aerosols, other greenhouse gases, and land-use change (see, e.g., *Climate Fix*, pp. 34, 146–47, and 236). Conversely, William Nordhaus argues that we should focus almost exclusively on carbon dioxide (see, e.g., *Climate Casino*, pp. 30, 157).

Think about what we know scientifically about the different greenhouse gases, aerosols, and other causes of climate change. What characteristics would lead you to support Nordhaus's view that CO_2 should be the principal focus of climate policy and what characteristics would lead you to agree with Pielke that it's bad to focus narrowly on CO_2?